

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 - 16. (Canceled)

17. (Currently amended) A computer system comprising:

a front-end server connected to a network and adapted to receive requests from one or more client computers;

a first back-end server connected to said front-end server and said client computers via said network and operative to receive I/O requests from ~~a requesting said front-end server~~computer;

a second back-end server connected to said front-end server and said client computers via said network ~~said first server via a network~~ and operative to receive I/O requests from said ~~front-end server~~requesting computer;

a first plurality of storage units initially accessible by said first back-end server and not accessible by said second back-end server;

a second plurality of storage units initially accessible by said second back-end server and not accessible by said first back-end server;

a managing computer in data communication with said front-end server and said back-end servers ~~first and second servers~~ via said network;

a first storage unit; and

a second storage unit;

said first storage unit being accessible by said first server but not by said second server;

said managing computer operative to obtain data access load conditions at each storage unit from said front-end server;

first and second servers;

23 wherein, based on said data access load conditions, including a condition in that a
24 load at a source storage unit in of said first plurality of storage units ~~server~~ exceeds a
25 predetermined amount, said managing computer operative to:
26 select a destination storage unit in said second plurality of storage
27 units~~unit~~;
28 copy a first data partition ~~stored from said source storage unit to said~~
29 destination storage unit in said first storage unit to said second storage unit and
30 subsequently delete said first data partition from said source ~~first~~ storage unit;
31 grant said first back-end server access to said destination storage unit;
32 ~~cause said second server to access said second storage unit;~~ and
33 transmit information to said requesting front-end server ~~computer~~ that said
34 first data partition is to be accessed by said first back-end server via said ~~second~~
35 destination storage unit~~server~~.

18-19. (Canceled)

1 20. (Currently amended) The system of claim 17 further comprising a storage
2 system, said storage system comprising said first plurality of storage units and said second
3 plurality of storage units~~storage unit~~, wherein a communication port in said ~~second first back-end~~
4 server and a communication port in said second back-end server can be configured for data
5 communication with ~~a communication ports~~ in said storage system ~~for data access to said~~
6 ~~second storage unit~~.

1 21. (Currently amended) The system of claim ~~17~~ 20, further comprising a
2 second first storage system comprising including a third plurality of said first storage units,
3 wherein communication ports in said second storage system can be configured for data
4 communication with communication ports in said first back-end server and said second back-
5 end server.

6 ~~and a second storage system comprising said second storage unit.~~

1 22. (Currently amended) The system of claim 17 wherein ~~moving said first~~
2 ~~data partition from said first storage unit to said second storage unit includes copying it from said~~
3 ~~first storage unit to said second storage unit, and subsequent to being copied to said second~~
4 ~~storage unit said first data partition is deleted from said first storage unit;~~

5 wherein additional data partitions in said first source storage unit can be similarly
6 moved to additional storage units, said first back-end server being granted access to said
7 additional storage units ~~being accessed by additional servers~~, said front-end server requesting
8 computer being informed of ~~said additional servers~~ that said additional data partitions are to be
9 accessed on said additional storage units.

23. (Canceled)

1 24. (Currently amended) The system of claim 2017 further comprising a
2 switch operative for data communication among devices connected to said switch, said first
3 back-end server and said second back-end server being connected to said switch, said storage
4 system being connected to said switch so that said first and second back-end servers can access
5 data stored in said first and second plurality of storage units, said switch further being operative
6 to direct data requests from one of said first and second back-end servers to a specified storage
7 unit in said storage system ~~one of said first and second storage units.~~

1 25. (Currently amended) The system of claim 17 wherein said management
2 computer includes a display unit operable to present a first display area and a second display
3 area,
4 said first display area to display one or more first symbols that represent said first
5 back-end server, said second back-end server, or any of said first plurality of storage units, and
6 having second symbols that represent communication paths,
7 said second display area having third symbols that represent any of said second
8 plurality of storage units,

9 wherein said management computer selects the ~~second~~destination storage unit in
10 accordance with receiving an indication for moving one of said third symbols from said second
11 display area into said first display area.

1 26. (Currently amended) A computer system comprising:
2 a first server operative to receive I/O requests from a requesting computer;
3 a managing computer in data communication with said first server; and
4 a first storage system comprising a plurality of storage units;
5 a second storage system comprising a plurality of storage units,
6 said first server in data communication with a first storage unit in said first storage
7 system,
8 said managing computer operative to obtain loading information relating to data
9 access load conditions of said first server,
10 based on said data access load conditions, including a condition in that a load of
11 said first server exceeds a predetermined amount, said managing computer operative to:
12 select a second storage unit from either said first storage system or said
13 second storage system;
14 perform a move operation of a first data partition stored in said first
15 storage unit to said second storage unit and subsequently delete said first data partition
16 from said first storage unit; ~~and~~
17 perform a first configuration operation granting said first server access to
18 ~~wherein said first server can access said first storage unit and said second storage unit;~~
19 and;
20 transmit information to said requesting computer that said first data
21 partition is to be accessed by said first server on said second storage unit.
22 ~~wherein said first data partition is accessed via said second storage unit.~~

27. (Canceled)

1 28. (Currently amended) The system of claim 26 wherein the managing
2 computer is further operative to perform a second configuration operation wherein a second
3 server is granted access to ~~accesses~~ said first data partition on said second storage unit, if said
4 first configuration operation cannot be performed, and wherein information is transmitted to said
5 requesting computer that said first data partition is to be accessed by said second server on said
6 second storage unit.

1 29. (Previously presented) The system of claim 28 wherein said requesting
2 computer is a front-end server that receives requests from client machines, said first server and
3 second server each being a back-end server which receives requests from said front-end server.

1 30. (Currently amended) The system of claim 26 wherein ~~data in~~ said first
2 storage unit stores ~~is partitioned into~~ a plurality of data partitions, said first data partition being
3 one of said data partitions, wherein said managing computer is further operative to move
4 additional data partitions from among said plurality of data partitions to additional storage units
5 based on data access load conditions obtained from said first server.

1 31. (Previously presented) The system of claim 26 further comprising a
2 switching device, said first server in data communication with said switching device, said
3 managing computer further being operative to obtain loading information from said first server
4 or said switching device.

1 32. (Previously presented) The system of claim 26 wherein said management
2 computer includes a display unit operable to present a first display area and a second display
3 area,

4 said first display area to display one or more first elements representative of said
5 first server, or said first storage unit, and second elements representative of communication paths
6 among said first elements,

7 said second display area to display one or more third elements representative of
8 said second storage unit,
9 wherein said management computer performs said first configuration operation in
10 accordance with receiving an indication for moving one of said third elements from said second
11 display area into said first display area.

1 33. (New) A computer system comprising:
2 a requesting computer including a front-end server for issuing an I/O request in
3 response to a signal from a client computer;
4 a plurality of back-end servers, connected to the front end server through a
5 network, for receiving the I/O request;
6 a storage device connected to the plurality of back-end servers through a
7 connection port provided therein, including a plurality of disks for storing data to be processed in
8 response to the I/O request received by at least one of the plurality of back-end server; and
9 a management computer connected to the requesting computer and the plurality of
10 back-end servers through the network for monitoring load conditions of the plurality of back-end
11 servers operating in response to the I/O request via the requesting computer;
12 the management computer including a display unit showing two kinds of symbols,
13 one of which shows the back-end server receiving the I/O request, the front-end server, or a first
14 disk, the other of which is representative of connections among the back-end server, the front-
15 end server and the first disk,
16 the management computer monitoring load conditions at the ports, a part of data
17 stored in any of the disks being controlled to be copied to another disk in response to a load in
18 excess of a predetermined amount;
19 wherein a part of data in a first disk processed by a first back-end server of the
20 plurality of back-end servers is controlled to be copied to a second disk accessed by a second
21 back-end server in case that a load of the first back-end server indicated by a number of I/O
22 access for the first disk exceeds a predetermined value, and controlled to be deleted from the
23 first disk, and

24 wherein the first disk is not accessible by the second back-end server before the
25 part of data stored by the first disk is copied to the second disk and deleted from the first disk,
26 and wherein the part of data copied to the second disk is accessible by both the first and the
27 second servers.

34-36 (Canceled)